# Staff Proposed 2010 Peak Demand Forecast

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# Peak Demand Forecast for Resource Adequacy

- The Energy Commission 1-in-2 peak demand forecast serves as the reference case for year-ahead monthly peak demand forecasts for CPUC-jurisdictional LSEs.
- Staff also collects nonjurisdictional forecasts and adjusts for coincidence. Import allocations for all LSEs in the CAISO are based on load shares calculated with the Energy Commission adjusted forecast.
- The 2010 forecasts for each LSE must be established by June 30th each year to meet CAISO and CPUC schedules. This forecast is the basis of their Fall filing demonstrating that they have met 90% of the 115% of monthly peak load requirement for the following year.
- LSEs must also procure resources to meet local area needs at the 1-in-10 level. The CAISO local area requirements analysis for 2010 used a revised forecast prepared by staff in January 2009 that attempted to adjust, to a limited extent, for changing economic conditions.
- For 2010 system requirements, staff is proposing to use the preliminary peak demand forecast.

# Resource Adequacy Demand Forecast Schedule

- Comments on the 2010 peak forecast due by June 5th.
- Final staff peak demand forecast for purposes of 2010 Resource Adequacy will be considered for adoption at the June 18th business meeting.
- Staff provides LSE forecasts and load shares to CAISO and CPUC on June 30.
- LSEs receive final forecasts and Demand Response allocations mid-July.

# Draft Peak Demand Forecast

## California ISO by Transmission Access Charge(TAC) Area

| Draft Forecast (MW) | | 2008 | 2009 | 2010 |
|---|---|---|---|---|
| | PGE | 21,784 | 20,517 | 20,692 |
| | SCE | 21,522 | 22,129 | 22,286 |
| | SDGE | 4,329 | 4,425 | 4,466 |
| | CAISO | 46,498 | 45,949 | 46,313 |
| **2007 IEPR Forecast (MW)** | | | | |
| | PGE | 21,671 | 21,954 | 22,236 |
| | SCE | 24,035 | 24,438 | 24,845 |
| | SDGE | 4,568 | 4,641 | 4,712 |
| | CAISO | 49,076 | 49,815 | 50,558 |
| **Difference (MW)** | | | | |
| | PGE | 113 | -1,436 | -1,544 |
| | SCE | -2,514 | -2,309 | -2,559 |
| | SDGE | -240 | -216 | -246 |
| | CAISO | -2,578 | -3,867 | -4,245 |
| **Percent Difference** | | | | |
| | PGE | 0.5% | -6.5% | -6.9% |
| | SCE | -10.5% | -9.4% | -10.3% |
| | SDGE | -5.2% | -4.6% | -5.2% |
| | CAISO | -5.3% | -7.8% | -8.4% |

# Draft Peak Demand Forecast

## Other California Balancing Authorities

| Draft Forecast (MW) | | 2008 | 2009 | 2010 |
|---|---|---|---|---|
| | LADWP | 6,789 | 6,342 | 6,334 |
| | SMUD | 4,542 | 4,430 | 4,483 |
| | TID | 589 | 553 | 560 |
| | IID | 977 | 975 | 994 |
| **2007 IEPR Forecast (MW)** | | | | |
| | LADWP | 6,317 | 6,355 | 6,388 |
| | SMUD | 4,727 | 4,797 | 4,868 |
| | TID | 563 | 572 | 581 |
| | IID | 1,063 | 1,097 | 1,129 |
| **Difference (MW)** | | | | |
| | LADWP | 471 | -12 | -54 |
| | SMUD | -185 | -367 | -385 |
| | TID | 26 | -19 | -21 |
| | IID | -87 | -121 | -135 |
| **Percent Difference** | | | | |
| | LADWP | 7.5% | -0.2% | -0.8% |
| | SMUD | -3.9% | -7.6% | -7.9% |
| | TID | 4.6% | -3.3% | -3.6% |
| | IID | -8.1% | -11.1% | -12.0% |

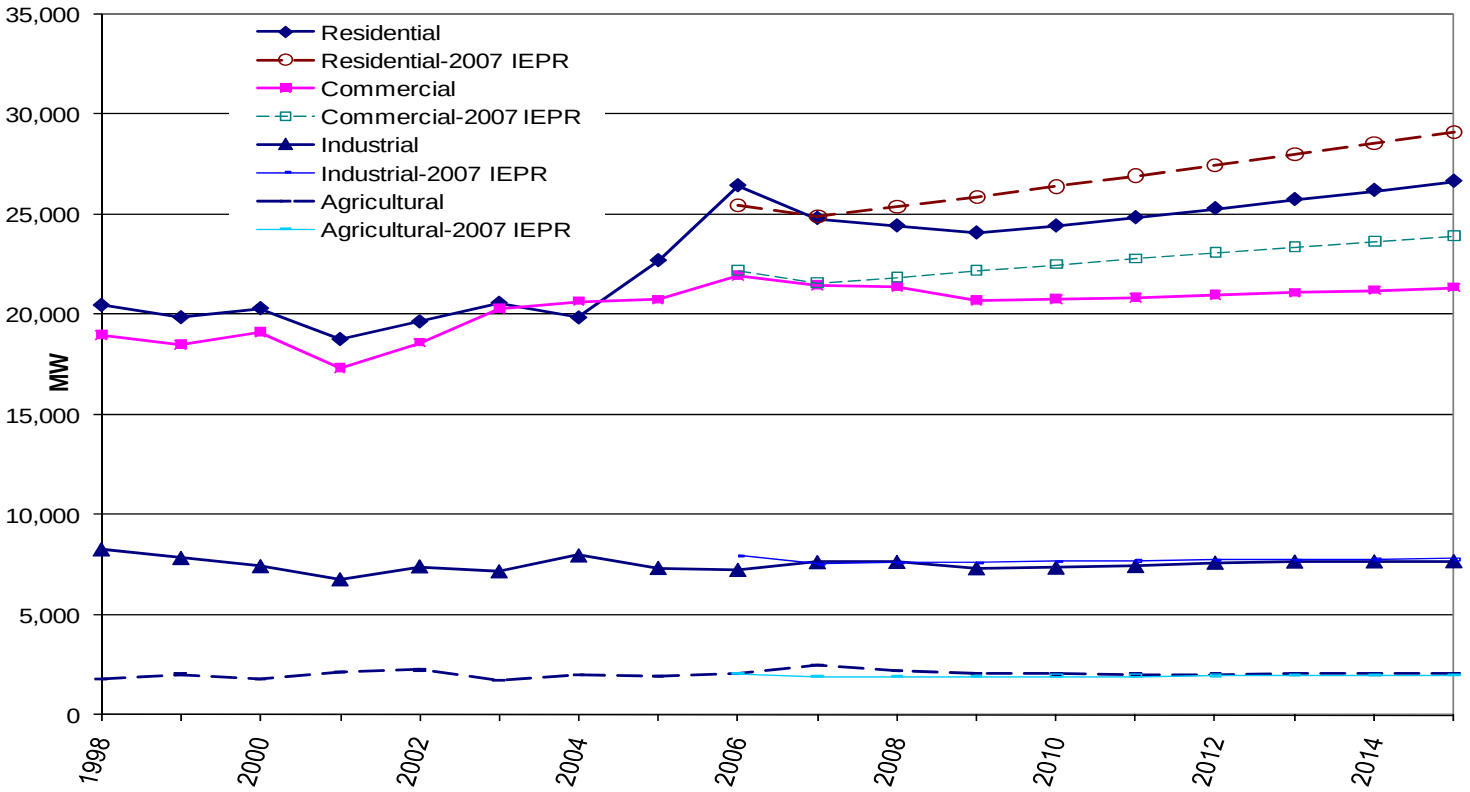
# Additional Efficiency Effects in the Draft Forecast

**Peak Impacts of Additional Efficiency Measures in Draft Forecast (MW)**

| | | Residential Energy Efficiency Programs | Commercial Energy Efficiency Programs | Agr. Energy Efficiency Programs | Increased Commercial Lighting Compliance | Total | Percent Change |
|---|---|---|---|---|---|---|---|
| PG&E | 2008 | 137 | 118 | 11 | 35 | 301 | -1.3% |
| | 2009 | 236 | 139 | 14 | 66 | 455 | -2.0% |
| | 2010 | 331 | 152 | 17 | 94 | 595 | -2.6% |
| SCE | 2008 | 87 | 46 | 4 | 40 | 178 | -0.8% |
| | 2009 | 152 | 80 | 14 | 76 | 321 | -1.4% |
| | 2010 | 213 | 111 | 23 | 108 | 456 | -2.0% |
| SDG&E | 2008 | 11 | 5 | 0 | 9 | 25 | -0.6% |
| | 2009 | 20 | 12 | 0 | 18 | 49 | -1.1% |
| | 2010 | 28 | 19 | 0 | 26 | 72 | -1.6% |

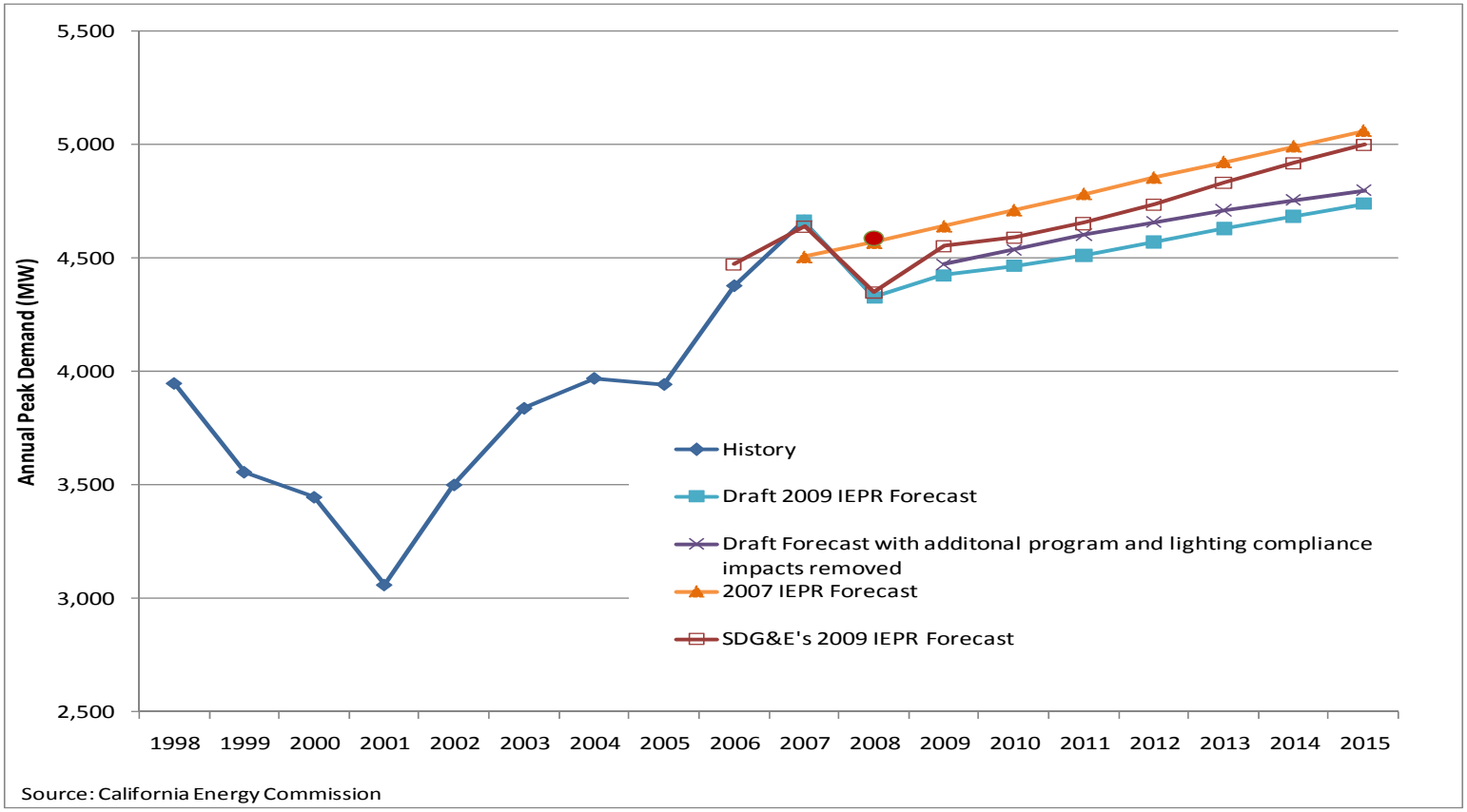
The additional efficiency effects contribute from 18-38% of the reduction in the 2010 forecast.

# Peak Load by Sector




The combination of increased energy efficiency and weak economic growth reduce residential and commercial peak demand by 7.5% each in 2010. The forecast of industrial peak demand is 4% lower.

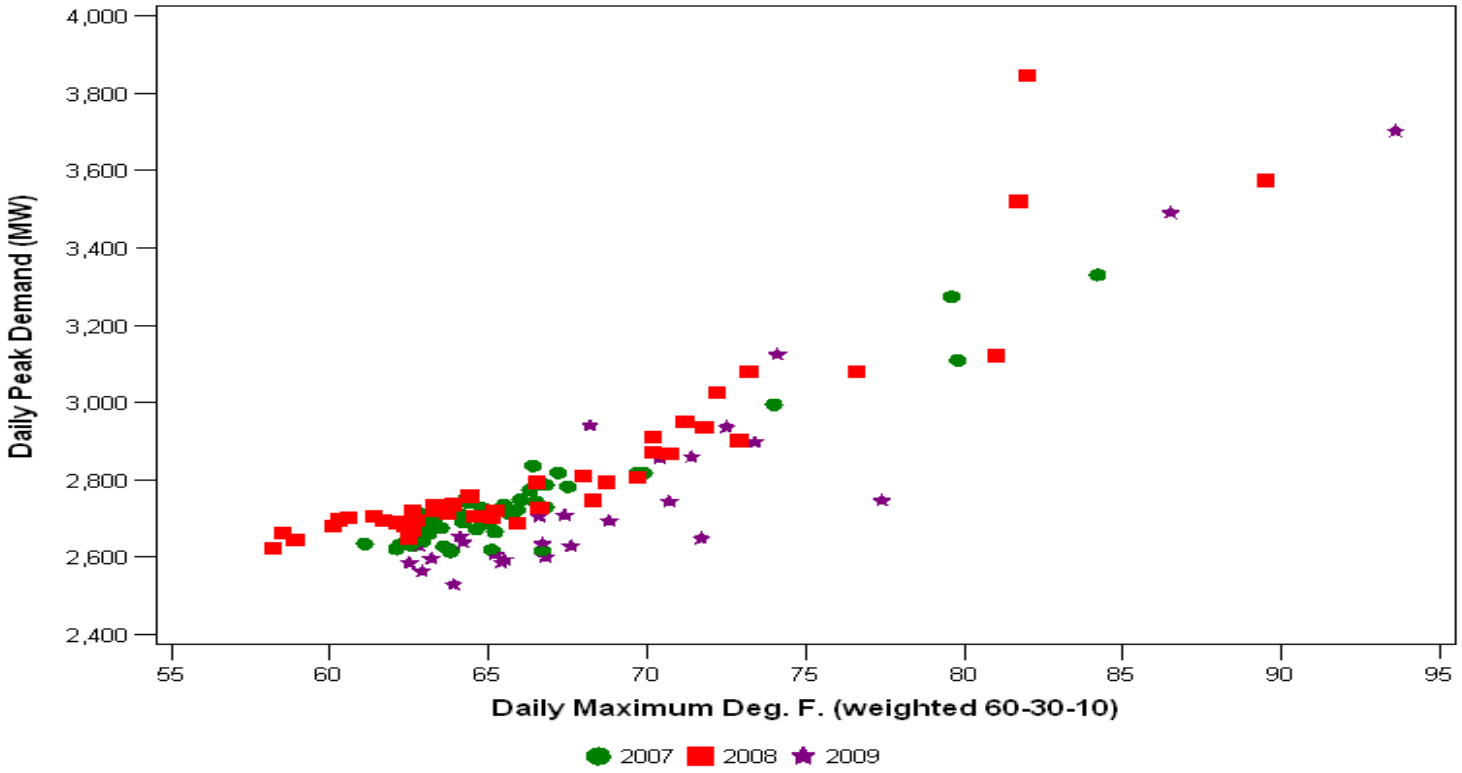
# SDG&E Area Peak Demand Forecast




Forecasted 2009 demand is 3.6% (165 MW) below the weather-adjusted 2008 peak.

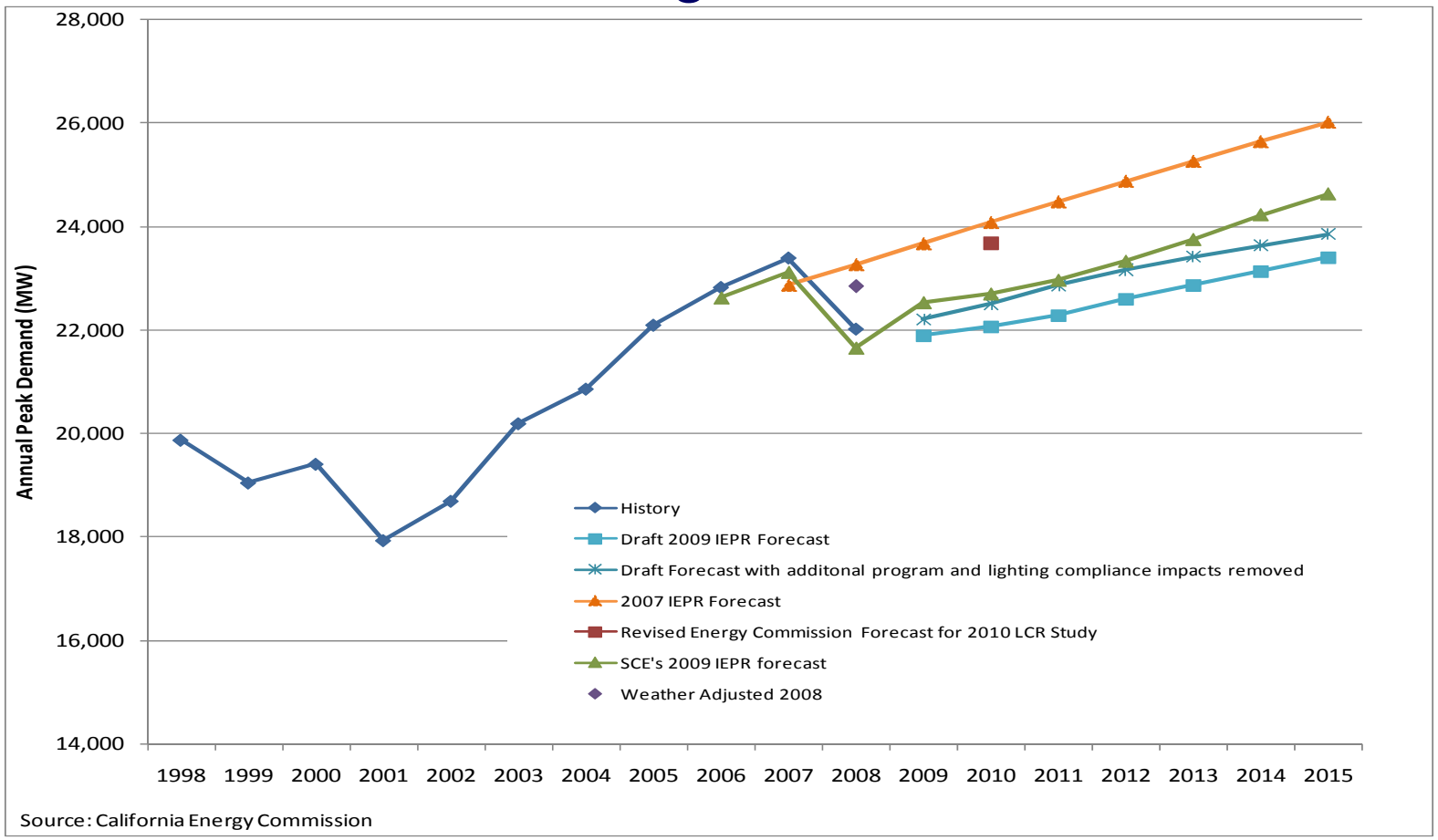
# SDG&E Daily Peaks and Temperatures

## April and May Weekdays




Staff estimated 2008/2009 monthly load-temperature response to assess current load growth. In SDG&E, the average year over year change in estimated weather-adjusted peak for January through April was -1%.

# SCE Planning Area Forecast




Forecasted 2009 Demand is 5.6% (1150 MW) below the weather adjusted 2008 peak.

# Draft SCE TAC Area Forecast (MW)

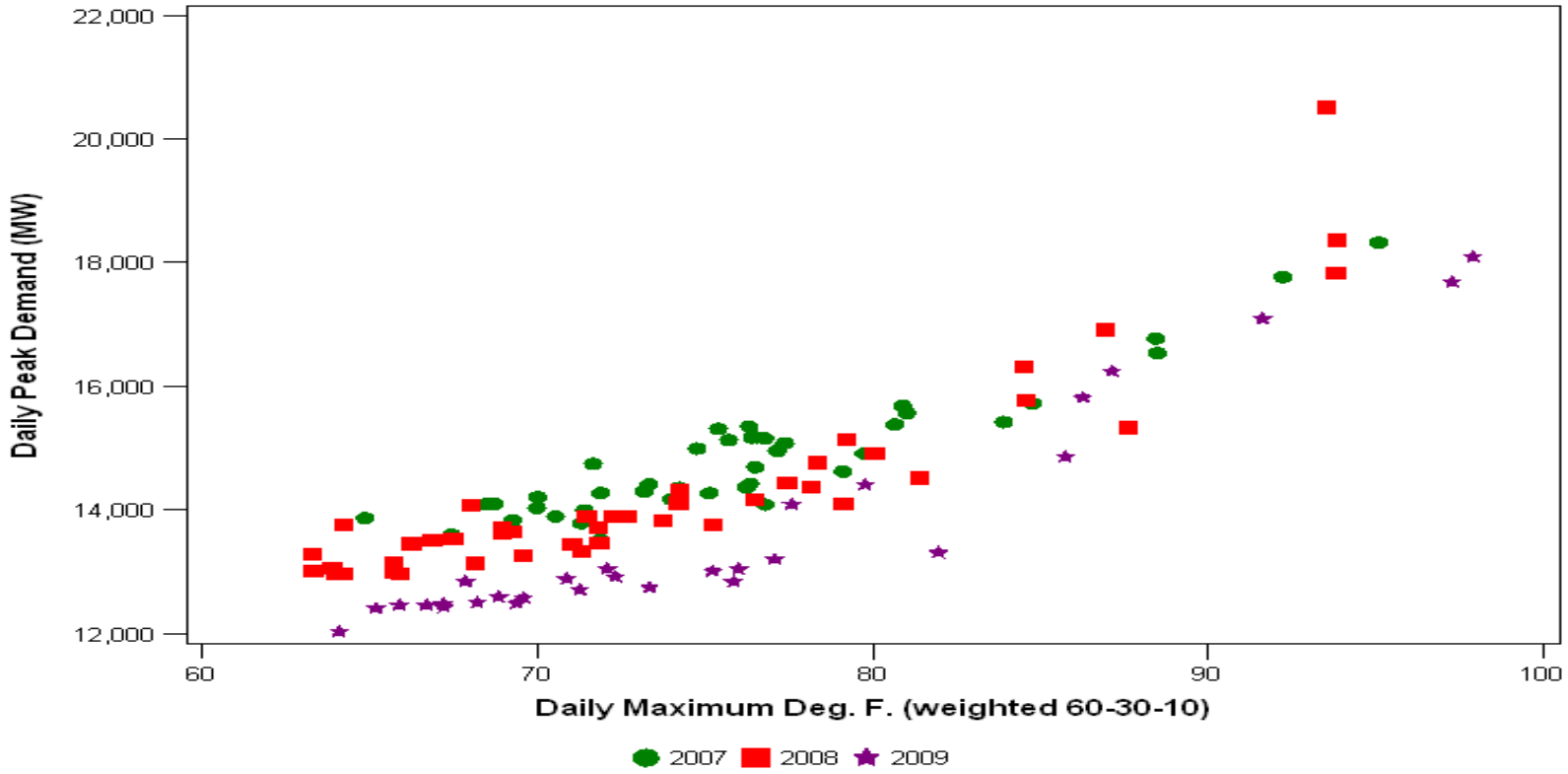
| | *2007 IEPR* Forecast | Revised Forecast for 2010 LCR | Draft *2009 IEPR* Forecast | | |
|---|---|---|---|---|---|
| | 1-in-2 | 1-in-2 | 1-in-2 | MW | % |
| **Coincident Peak by Utility** | **2010** | **2010** | **2010** | **Change** | **Change** |
| SCE Service Area | 22,227 | 21,849 | 20,183 | -1,666 | -7.6% |
| Anaheim Public Utilities Dept. | 584 | 578 | 527 | -52 | -9.0% |
| Riverside Utilities Dept. | 619 | 603 | 540 | -63 | -10.5% |
| Vernon Municipal Light Dept. | 184 | 182 | 177 | -5 | -2.8% |
| Metropolitan Water District | 185 | 185 | 185 | 0 | 0.1% |
| Other Publicly Owned Utilities | 282 | 276 | 213 | -63 | -22.8% |
| Pasadena Water and Power Dept. | 300 | 300 | 283 | -17 | -5.6% |
| Dept of Water Resources - South | 463 | 178 | 178 | 0 | 0.0% |
| **SCE TAC Area Coincident Peak** | **24,845** | **24,152** | 22,286 | -1,866 | -7.7% |

Source: California Energy Commission

The LSE and TAC level forecast was developed using historic coincident peaks and planning area growth rates.

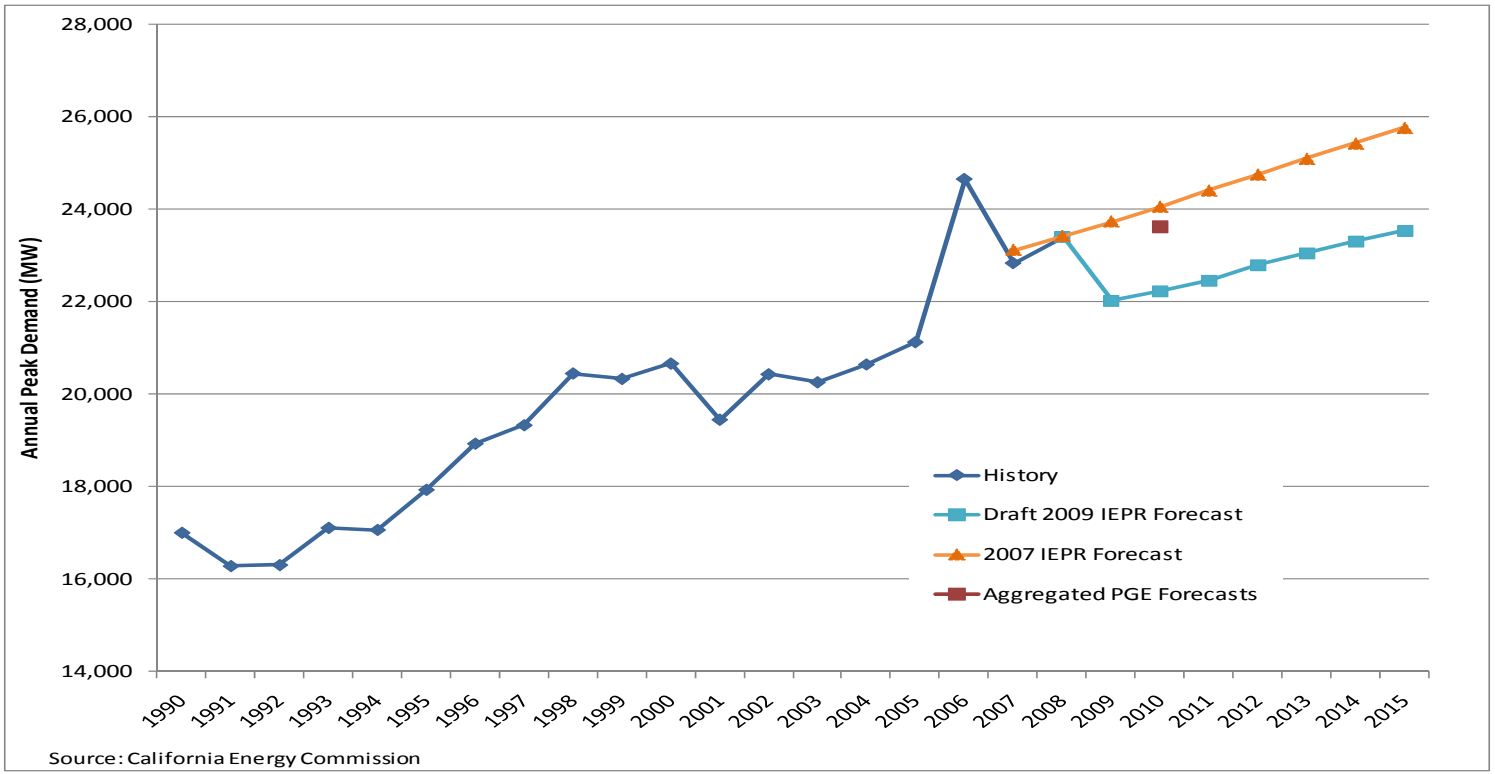
# SCE TAC Area Daily Peaks and Temperatures

## April and May Weekdays



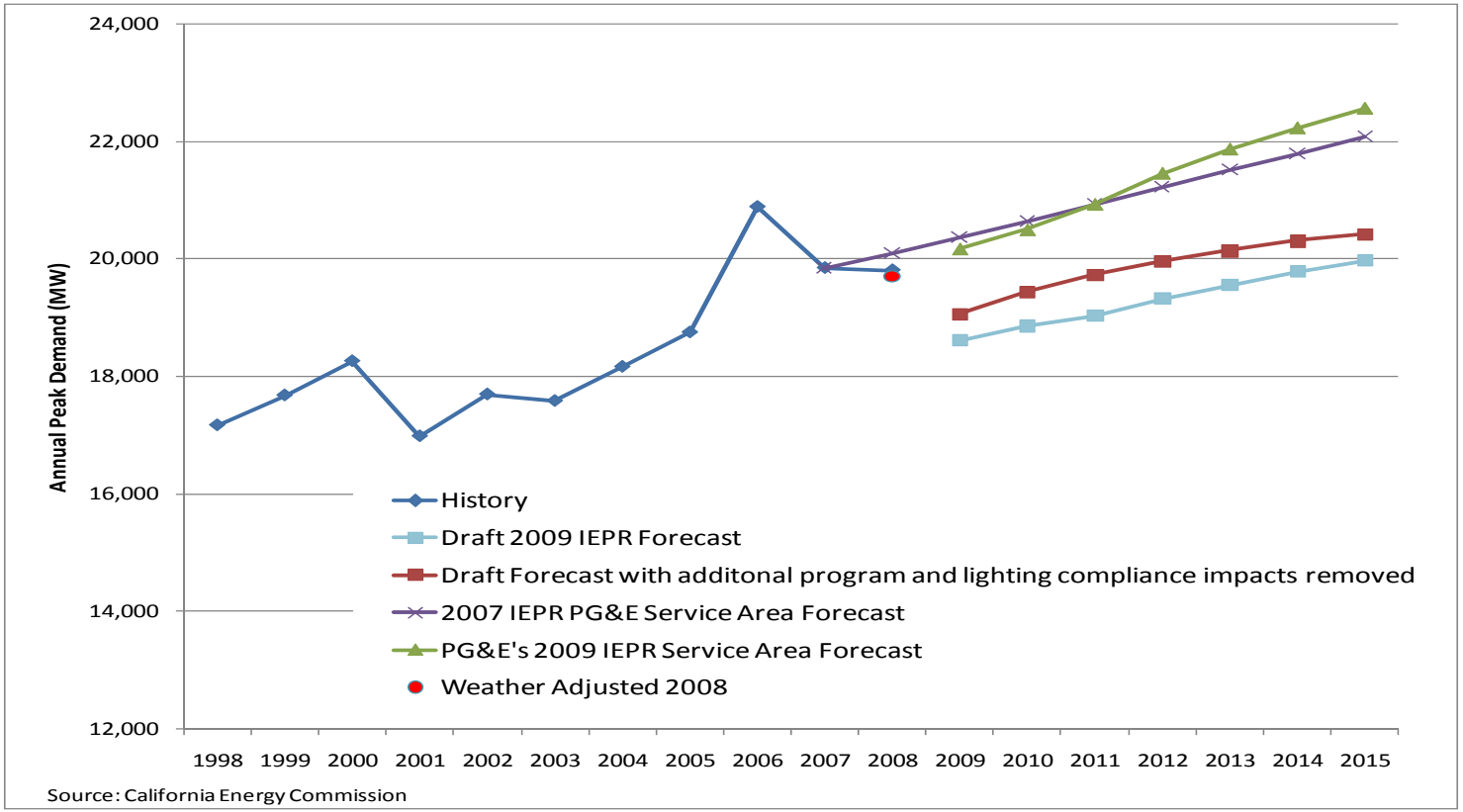

Staff estimates April 2009 baseload declined by 580 MW compared to April 2008. Average year over year change in weather-adjusted peak Jan.-April is -3.7%.

# PG&E Planning Area Forecast




The PG&E planning forecast, which includes non-CAISO LSEs such as MID, TID, Redding, and Roseville, declines by 5.8% from 2008 to 2009.

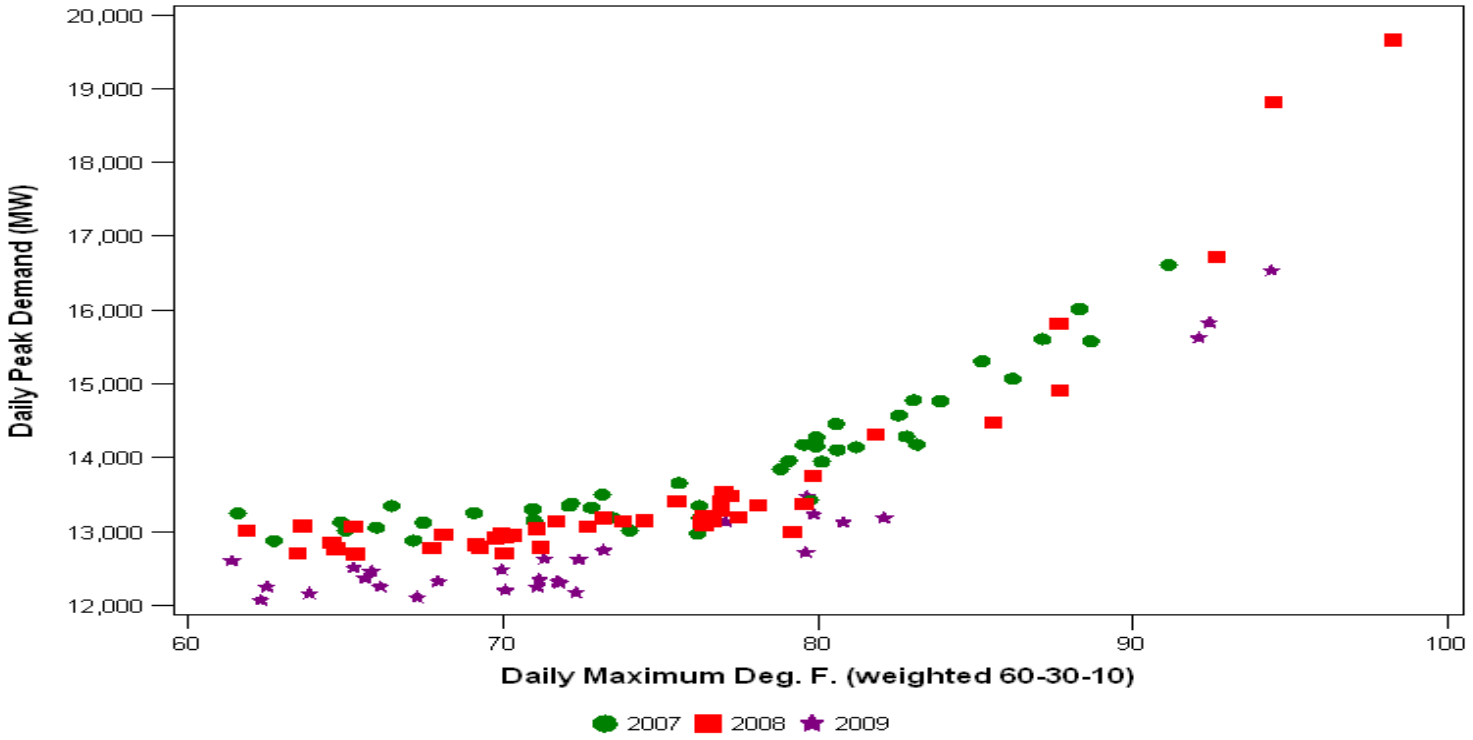
# PG&E Service Area Forecast




Forecasted 2009 demand is 5.5% (1088 MW) lower than the weather-adjusted 2008 peak.

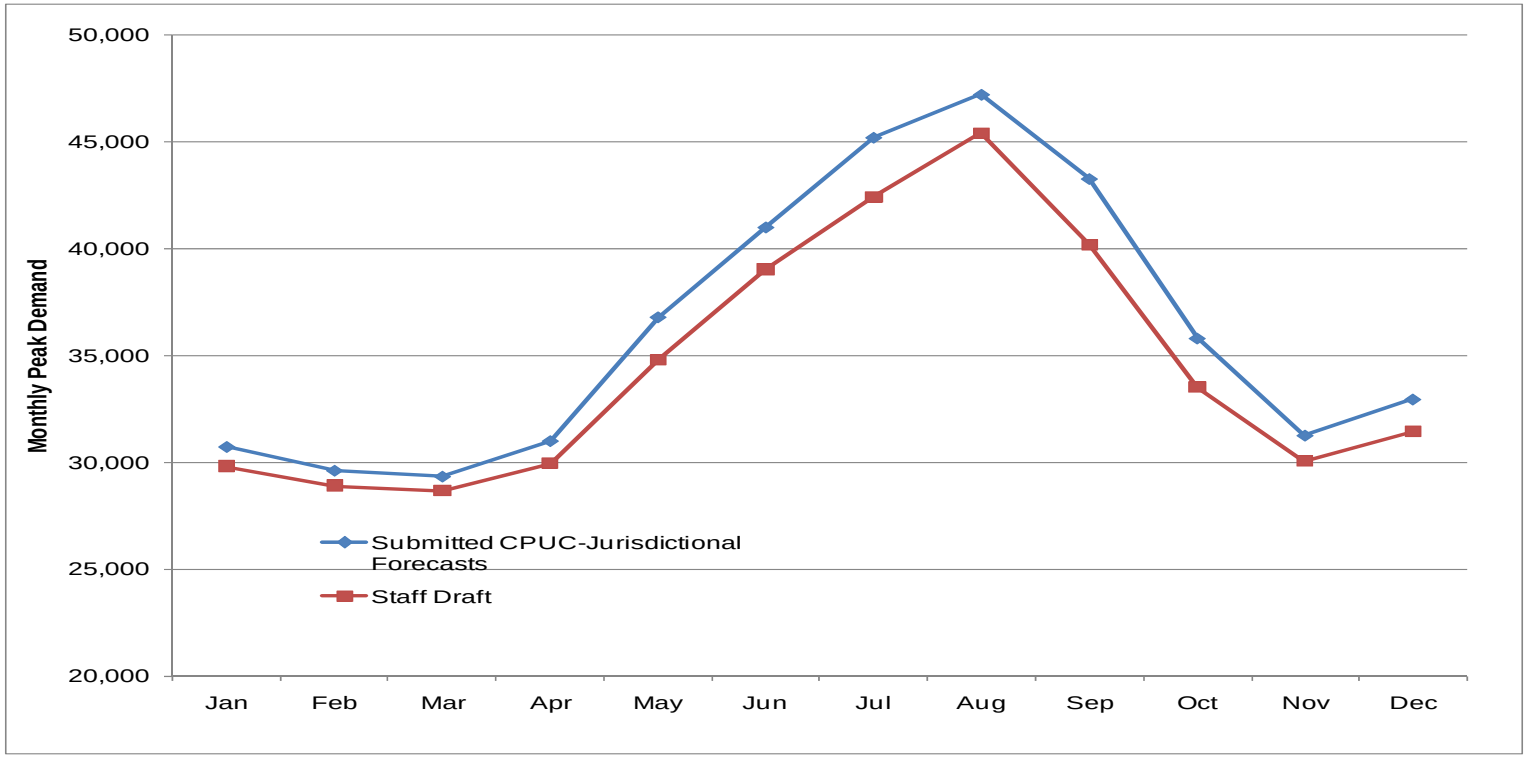
# PG&E TAC Area Daily Peaks and Temperatures

## April and May Weekdays




Staff estimates that April 2009 baseload was 500 MW lower than April 2008.

# Staff Forecast versus Forecasts Submitted by CPUC-Jurisdictional LSEs




Staff developed monthly peaks by service area from by estimating 2008 seasonal load-temperature response, and calculating the median predicted demand using historical weather data. The sum of the submitted forecasts, after adjustments must sum to within 1% of the Energy Commission forecast.

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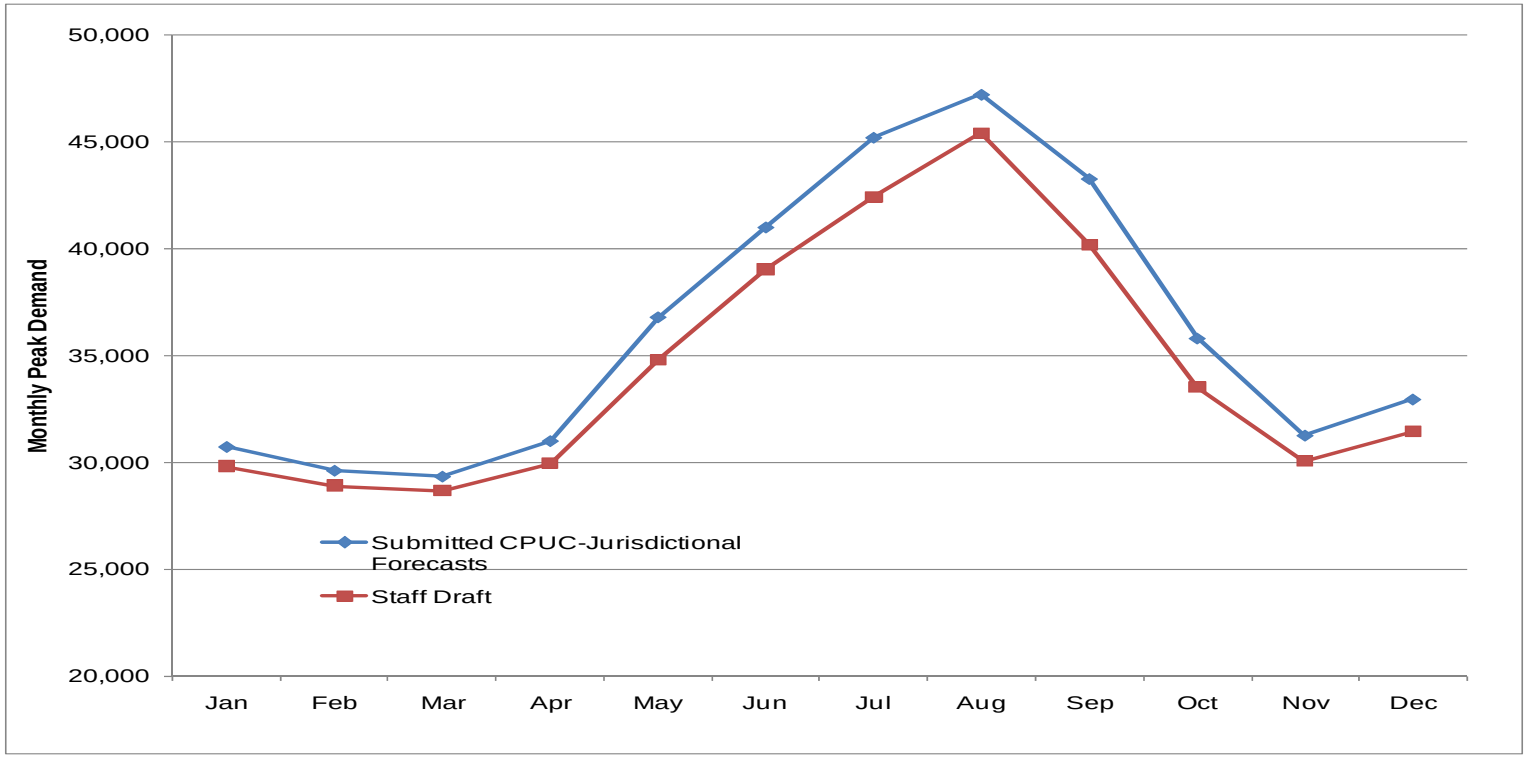


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